

THE STATUS OF *BLEPHILIA* (LAMIACEAE) IN TEXAS

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## ABSTRACT

*Blephilia hirsuta* and *B. ciliata* have been mentioned as occurring in Texas by several authors, but, until now, no voucher specimens have been located. *Blephilia hirsuta* is documented as occurring in Texas for the first time, while reports of *B. ciliata* in Texas seem to be based on a mis-determination of a specimen of *Monarda clinopodioides*.

**KEY WORDS:** Lamiaceae, *Blephilia*, Texas.

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*Blephilia* Rafinesque (Lamiaceae) is a genus of perennial erect or ascending herbs that are closely allied to *Monarda*. The major difference between the two genera that supports generic separation is the two-lipped (bilabiate) calyx, whereas *Monarda* has a calyx with five somewhat equal teeth. *Blephilia* is currently recognized to consist of three rather variable species of eastern North America (Simmers and Kral 1992). One species, *B. subnuda* Simmers & Kral, is endemic to the Cumberland Plateau province of northern Alabama. The other two, *B. ciliata* (L.) Benth. and *B. hirsuta* (Pursh.) Benth., have large, essentially sympatric distributions encompassing most of eastern North

America (USDA, NRCS 2005). Both have had a rather contradictory history in Texas. Small (1933), Fernald (1950), Correll & Johnston (1970), and Hatch et al. (1990) have attributed both to the state. As is normal for floras, neither Small nor Fernald document the presence by citation of a specimen. Correll and Johnston (1970) added this disclaimer to their treatment, "No Texas material has been seen. They are included here based on Fernald's [1950] report of their occurrence in the state." The distribution for both species was given as "possibly in n.e. Texas." Hatch et al. (1990), in their checklist of the vascular flora of the state, noted the following: "Expected to be in Area 1 by C. & J." Area 1 is the Pineywoods of east Texas, while C. & J. is a reference to Correll and Johnston (1970). The statement is best interpreted to mean that neither of the species has been documented as occurring in Texas. Others, such as Robinson (1896) and Small (1913), have cited *B. hirsuta* in Texas while Johnston (1990), in a list updating the *Manual of the Vascular Plants of Texas*, retained *B. ciliata* as part of the flora, but excluded *B. hirsuta* with the statement "We still have no evidence that this species occurs in Texas." This seems to imply that there is reason for retaining *B. ciliata* as part of the state's flora. However, in personal communication with the senior author on file at BAYLU, Johnston remarked that there is no justifiable reason for its inclusion in the state. The checklists of Gould (1962) and Jones et al. (1997), as well as the *Atlas of the Vascular Plants of Texas* (Turner et al., 2003), the latest work to enumerate the flora of the state, did not include *Blephilia* as part of the state's flora. Finally, the genus is not cited as occurring in Texas by USDA, NRCS (2005). It is evident from the literature review that neither species of *Blephilia* has ever been documented in the state by citation of a voucher specimen and that exclusion from last three references cited effectively removes *Blephilia* as a known part of the flora of the state. Our research into the occurrence of *Blephilia* in Texas has yielded the following.

***Blephilia ciliata*.** As best can be determined, *B. ciliata* was first mentioned as occurring in Texas by Small (1933) where he gave the distribution as "Fla. to Tex." Fernald (1950) stated the distribution as "Ga., Miss., Mo. and e. Tex." To Texas botanists, both of these distributions imply that the species occurs in that part of the state

known as the Pineywoods, which is the western part of the vast southeastern pine-oak-hickory forest. Correll and Johnston (1970) stated that *B. ciliata* was “possibly in n.e. Texas” which was interpreted by Hatch et al. (1990) as the Pineywoods, but, in the broad sense, could also refer to the Post Oak Savannahs that lie to the west of the Pineywoods. It appears likely that this distribution is based upon the proximity of northeast Texas to the more northern occurrences of the species in Arkansas and Oklahoma. Our search efforts resulted in locating the following specimen, which seems to be the basis for reporting *B. ciliata* in the state. The specimen was originally in the personal herbarium of Thomas C. Porter that was later acquired by the Academy of Natural Sciences of Philadelphia (at which time the original label, which is in an envelope, was copied and attached to the sheet). We are citing the original label. The only other item of interest is the annotation as *Blephilia ciliata* (L.) Benth. by Sharon S. & Arthur O. Tucker in 1994.

*Blephilia ciliata*, Raf. Ft. Belknap—Texas. 1855. leg. Dr. Vollum [s.n.].

Fort Belknap is in Young County, about 3 miles south of Newcastle on Texas Hwy 251. The fort was founded in 1851, originally on the Red Fork of the Brazos River, but was moved later that year to its present location. The area is now a park and museum. Young County is located in the western edge of the Cross Timbers and Prairies (Gould 1962, Correll and Johnston 1970, Hatch et al. 1990). Fort Belknap is approximately 400 km west southwest of the nearest known occurrence of *B. ciliata* in McCurtain and LeFlore counties in Oklahoma. From a phytogeographic point of view, this appears to be an improbable location for this species. Examination of the specimen showed it to have tubular calyx consisting of five equal calyx teeth and not a bilabiate calyx typical of *Blephilia*. The specimen is referable to *Monarda clinopodioides* A. Gray, a species found throughout the eastern half of Texas (Turner et al. 2003, Diggs et al. 1999). All indications are that *Vollum s.n.* was used as the basis for citing *B. ciliata*, hence it follows that the species should not be considered as part of the Texas flora.

***Blephilia hirsuta***. An inquiry to GH resulted in the discovery and loan of a specimen of *B. hirsuta* from Texas. The "label" data, written directly on the herbarium sheet, had the following information: "Texas. Wright." The "label" and specimen are attached to the left side of the sheet and, as is typical with Wright specimens from east Texas, is unnumbered. As was common practice in the Gray Herbarium at that time (pers. comm. with David E. Boufford (GH) quoted in Singhurst et al. 2000), another specimen was placed on the right side of the sheet. This is a specimen of *B. hirsuta* from Missouri collected by Fritchey in 1857, which has no role in this matter. Surprisingly, the Texas specimen was annotated by Donovan Correll in 1968 as *B. hirsuta*. Apparently through some oversight, the information about the specimen was not included in Correll and Johnston (1970) as was done with other once collected species such as *Isopyrum biternatum* (Raf.) Torr. & A. Gray (Ranunculaceae), *Habenaria (Platanthera) integra* (Nutt.) Spreng. (Orchidaceae), and *Smilax herbacea* L. (Smilacaceae). While the Wright specimen does document the occurrence of *B. hirsuta* in the state, it does not provide precise information about when and where it was collected. Correll and Johnston (1970) mention the occurrence as "possibly in n.e. Tex." which appears based upon the proximity of northeast Texas to the occurrences of the species in Oklahoma and Arkansas. While that appears a likely site for rediscovery of *B. hirsuta*, it is doubtful that the Wright specimen is from there. Wright worked as a surveyor in east Texas from 1837-45, after which he left to take a position at Rutgersville College in Lagrange, Fayette County. According to Geiser (1948), which is summarized in Singhurst et al (2000), Wright's activities were mostly confined to Angelina, Jasper, Newton, and Tyler counties. Except for the northern portion of Angelina County, these counties are mostly contained in the longleaf pine region, which is an unlikely location for *Blephilia*. No mention is made of Wright traveling to northeast Texas. It is probable that the specimen is from a non-longleaf pine area of one of the four east Texas counties cited above that was collected during Wright's tenure there (1837-45).

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